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(54) Title: **ELECTROCHEMICAL ASSAY FOR THE IDENTIFICATION OF MICROORGANISMS**

(57) Abstract: A method for the phenotypic identification of microorganisms is provided. The method is based on the evaluation of the effects of various compounds (effectors) on the respiratory cycle activity of microorganisms. Measurements are based upon the ability of the microorganism to transport electrons to an external chemical oxidant (a mediator) that is added to the microorganism sample. The mediator interacts with the terminal components of the respiratory pathway and the extent of its consumption is related to the ability of the microorganism to respire. The consumed mediator is subsequently measured electrochemically. Electrochemical signals which are generated in the presence or absence of an effector can be used to generate a signal pattern that is unique to an organism and can be used for identification.



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